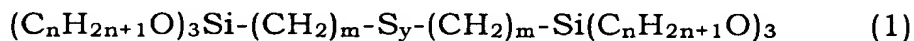


WHAT IS CLAIMED IS:

1. A rubber composition which comprises a diene base rubber comprising at least 15 % by weight of a polybutadiene rubber; silica in an amount of 10 to 80 parts by weight per 100 parts by weight of the diene base rubber; in an amount of 1 to 20 % by weight of the amount of silica, a silane coupling agent which is represented by following general formula (1):



(wherein n represents an integer of 1 to 3, m represents an integer of 1 to 9, y represents a positive number of 1 or more which has a distribution), and in which the content of trisulfide silane is 20 % or more based on the entire polysulfide silane and the content of high polysulfide silane, in which y is 5 or a number greater than 5, is 50 % or less; and

after curing, said rubber composition includes closed cells.

2. A rubber composition according to claim 1, wherein the diene base rubber comprises 20 to 80 parts by weight of a rubber component comprising at least one member selected from the group consisting of natural rubber and synthetic isoprene

rubbers and 80 to 20 parts by weight of a cis-1,4-polybutadiene rubber.

3. A rubber composition according to claim 1, wherein the amount of silica is 15 to 60 parts by weight per 100 parts by weight of the diene base rubber.

4. A rubber composition according to claim 1, wherein the expansion ratio of the cured diene base rubber is 2 to 50 %.

5. A rubber composition according to claim 1, wherein the amount of silane coupling agent is 3 to 15 % by weight of the amount of silica.

6. A rubber composition according to claim 1, wherein the content of trisulfide silane in the polysulfide silane coupling agent molecule represented by general formula (1) is 30 % or more based on the entire polysulfide silane, and the content of high polysulfide silane, in which y is 5 or a number greater than 5, is 40 % or less based on the entire polysulfide silane.

7. A rubber composition according to claim 1, wherein the rubber composition comprises 5 to 50 parts by weight of carbon black per 100 parts by weight of the diene base rubber, the carbon black having a nitrogen absorption specific surface area (N_2SA) of

105 m²/g or more and having a dibutyl phthalate oil absorption (DBP) of 110 ml/100 g or more.

8. A rubber composition according to claim 7, wherein the sum of the amount of carbon black and the amount of silica is 80 parts by weight or less per 100 parts by weight of the diene base rubber, and a weight ratio of the amount of carbon black to the amount of silica is 1 : 0.5 to 1 : 15.

9. A rubber composition according to claim 8, wherein a weight ratio of the amount of carbon black to the amount of silica is 1 : 0.5 to 1 : 7.

10. A pneumatic tire which is manufactured by using the rubber composition described in claim 1 for tread rubber.

11. A pneumatic tire which is manufactured by using the rubber composition described in claim 2 for tread rubber.

12. A pneumatic tire which is manufactured by using the rubber composition described in claim 4 for tread rubber.

13. A pneumatic tire which is manufactured by using the rubber composition described in claim 6 for tread rubber.

14. A pneumatic tire which is manufactured by using the rubber composition described in claim 7 for tread rubber.

15. A pneumatic tire which is manufactured by using the rubber composition described in claim 8 for tread rubber.

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